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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/816,718

04/02/2004

Georg Wittmann

12406-062001

1015

26181 7590 06/02/2008  
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EXAMINER

HA, NATHAN W

ART UNIT

PAPER NUMBER

2814

MAIL DATE

DELIVERY MODE

06/02/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/816,718	<b>Applicant(s)</b> WITTMANN ET AL.	
	<b>Examiner</b> Nathan W. Ha	<b>Art Unit</b> 2814	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 31-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-30, 35 and 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17-30 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 6,897,474, previously cited, hereinafter, Brown) in view of Marrocco, III et al., newly cited, hereinafter, Marrocco.)

Regarding claim 17, Brown discloses an organic electronic device that has one or more components in fig. 6 that are sensitive to moisture or oxidizing agents, comprising: a flexible substrate (115), col. 11 line 61 ; a functional area (116), col. 10 line 15, on the substrate (115) comprising one or more active organic elements OLED (116); a cap (120), col. 6 line 40, encapsulating the organic functional area (116); and a first flexible multilayer packaging material (110), col. 6 line 40, having a first polymeric barrier layer (11 la), col. 11 line 53, and a ceramic barrier layer (112a), col. 11 line 54, wherein the first flexible multilayer packaging material (110) protects the functional area (140).

But Brown does not disclose the organic electric device wherein the first active polymer barrier comprising a polymeric matrix with anhydrides.

Wiercinski, in figs. 6-8, discloses an analogous OLED device comprising a polymer matrix with anhydride, wherein the polymer 36 or 37, polystyrene, for example, is treated with the same anhydride material. This process is similar to the currently claimed limitation and the polymer is the as current claimed invention. Therefore, it should produce a same product such polymer is interact with anhydride. Thus, at the time of the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the polymer matrix with anhydride teaching of Marrocco with Brown's device in order to esterify the alcohol groups. See also paragraph [0130].

With respect to "active polymer that binds moisture and oxidizing agents" is only a statement of the inherent properties of the product. The structure recited in "reference" is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent. The claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established, MPEP 2112.01.

Regarding claim 18, Brown discloses the organic electronic device according to claim 17, wherein: the first flexible multilayer packaging material (110) is arranged between the functional area (116) and the flexible substrate 115, fig. 6.

Regarding claim 19, Brown discloses the organic electronic device according to claim 17, wherein the cap 120 comprises the first flexible multilayer packaging material (121a).

Regarding claims 20 and 24, Brown discloses the organic electronic device according to claim 17, wherein the cap comprises a second flexible multilayer packaging material 150 comprising: at least one ceramic barrier layer (122a); and at least one polymeric barrier layer (121a).

But Brown does not disclose the at least one active polymeric barrier layer of the second flexible multilayer packaging material includes one or more materials from the group consisting of a polymeric matrix with dispersed cyclodextrines and a polymeric matrix with anhydrides.

However, Wiercinski discloses an active polymer barrier comprising a polymer matrix with anhydride, see abstract and col. 9 lines 3-7. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to incorporate the polymer matrix with anhydride teaching of Wiercinski with Brown's device for the same reason as discussed in claim 17 above.

Regarding claims 21,22, Brown discloses the organic electronic device according to claim 17, wherein: the cap 110 includes one or more materials from the group consisting of polymers, metals and glass, column 5 line 1, wherein: the flexible substrate 110 comprises a polymer, column 4 line 56.

Regarding claim 23, Brown discloses the organic electronic device according to claim 22, wherein: the cap 120 comprises a second flexible multilayer packaging material comprising: at least one active polymeric barrier layer 121b; and at least one ceramic barrier layer 122a.

Regarding claim 25, Brown discloses the organic electronic device according to claim 22, wherein: the flexible substrate 110 includes a second active polymeric barrier layer 121b, fig. 6.

Regarding claim 26, Brown discloses the organic electronic device according to claim 17, wherein: the flexible substrate comprises an assembly of active polymeric barrier layers 112a and ceramic barrier layers 111a.

Regarding claim 27, Brown discloses the organic electronic device according to claim 26, wherein the substrate 115 has a first surface (top) and a second surface (bottom), the first surface (top) is closer to the functional area 116 than the second surface (bottom) comprises a ceramic barrier layer 112, fig. 5.

Regarding claims 28-29, Brown disclose the organic electronic device according to claim 17, wherein the one or more active organic elements 116 comprises at least one stack having a first electrically conductive layer (cathode), an organic functional layer (light-emission layer) on the first conductive layer (cathode) and a second electrically conductive layer (anode) on the organic functional layer; and the organic functional layer comprises at least one organic electroluminescent layer, column 8 lines 1-19 and US 5707745 incorporated by reference.

Regarding claims 30 and 36, Marrocco discloses the anhydrides are acid anhydrides of organic acids.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown and Marrocco and in view of Krell et al (US 6841497, previously cited, hereinafter Krell.)

Regarding claim 35, the combination of Brown and Wiercinski disclose all limitations of claim 35, except the first and second ceramic barrier having the same composition but exhibiting different microstructure from one another.

However, Brown discloses the first and second ceramic barrier 112a-c including aluminum oxide and other, col. 12 line 42, can be same or different, see claim 19. In addition, Krell discloses an aluminum oxide of different crystal structure, col. 1 lines 9-11. At the time the invention was made; it would have been obvious to a person having ordinary skill in the art to incorporate the ceramic having different crystal structure teaching of Krell in the device of Brown in order to a ceramic barrier with different barrier properties such as chemical oxidative as well as wear resistant, col. 1 lines 16-35.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 17-30 and 36 have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant's arguments filed 2/8/08 have been fully considered but they are not persuasive. In response to applicant's argument that Krell is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this

case, Krell is incorporated to show a widely used of the barrier layers which would produce a structure exhibiting different microstructure from one another.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Ha whose telephone number is (571) 272-1707. The examiner can normally be reached on M-TH 8:00-7:00(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nathan W. Ha/  
Primary Examiner, Art Unit 2814



Application/Control Number: 10/816,718  
Art Unit: 2814

Page 8